Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

Proposed

AIR QUALITY PERMIT

Issued under 401 KAR 52:020

Permittee Name:	**Cash Creek Generation, L.L.C.**
Mailing Address:	**4350 Brownsboro Road, Suite 110, Louisville, Ky 40207**
Source Name:	**Cash Creek Generation Station**
Mailing Address:	**4350 Brownsboro Road, Suite 110, Louisville, Ky 40207**
Source Location:	**Kentucky State Highway 1078 in Henderson County**
Permit Number:	**V-07-017**
Source A. I. #:	**40285**
Activity #:	**APE20060001**
Review Type:	**Title V/PSD NSR, NSPS**
Source ID #:	**21-101-00134**
ORIS Code:	**56107**
Regional Office:	**Owensboro** **3032 Alvey Park Drive W., Suite 700** **Owensboro, KY 42303-2191** **(270) 687-7304**
County:	**Henderson**
Application Complete Date:	**March 29, 2007**
Issuance Date:	**November 30, 2007**
Revision Date:	
Expiration Date:	**November 30, 2012**

John S. Lyons, Director
Division for Air Quality

Revised 10/19/05

TABLE OF CONTENTS

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division of Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emissions Units: 01 (01) & 02 (02) – Coal gasifiers and Synthesis/Natural Gas-Fired Combined Cycle Combustion Turbines [Emissions Units: HRSG-1 & HRSG-2]

Description:

2917 MMBtu/hr rated heat input capacity to each gasifier.
2114 MMBtu/hr rated heat input capacity to each combustion turbine.
Approximately 770 MW nominal power capacity with a net output of 630 MW (both turbines and recovery steam generators).
GE 7FB synthesis gas (primary) or natural gas (secondary) fired combined cycle combustion turbine equipped with diluent nitrogen injection.
Control Equipment: equipped with Selective Catalytic Reduction (SCR) for NOx, Nitrogen Dilution
Fuel pretreatment: Acid Gas Scrubber and Carbon Absorption
Construction commenced: estimated - 2008

APPLICABLE REGULATIONS:
401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982;

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Da, Standards of Performance for Electric Utility Generating Units for which construction is commenced after September 18, 1978.

401 KAR 59:016. New electric utility steam generating units. (State-only requirements)

401 KAR 51:160, NOx requirements for large utility and industrial boilers; 401 KAR 51:210, CAIR NOx annual trading program, and 401 KAR 220 CAIR NOx ozone trading program.

401 KAR 52:060, Acid rain permits, incorporating provisions as codified in 40 CFR Parts 72 to 78

(Proposed, not yet applicable) 401 KAR 60:020. Mercury Budget Trading Program. Promulgated to meet the requirements of 40 CFR 60 Subpart HHHH—Emission Guidelines and Compliance Times for Coal-Fired Electric Steam Generating Units

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances

40 CFR Part 75, Continuous Emission Monitoring;

40 CFR Part 64, Compliance Assurance Monitoring (CAM)

1. Operating Limitations:

a) Synthesis gas(mainly consists of carbon monoxide and hydrogen gas), and natural gas shall be the sole fuels fired in the turbines. [Pursuant to 401 KAR 51:017, Prevention of significant deterioration of air quality].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b) The average heat input to each turbine shall not exceed 2114 MMBtu/hour at ISO standard day conditions on a three hour rolling average. [Pursuant to 401 KAR 51:017, Prevention of significant deterioration of air quality].

c) Pursuant to 401 KAR 51:017, the permittee shall install control devices required to meet BACT.

d) Pursuant to 40 CFR 60, Subpart Da, the combined cycle gas turbine shall be designed and intended to burn fuels containing 50 percent (by heat input) or more solid-derived fuel not meeting the definition of natural gas on a 12-month rolling average basis.

2. Emission Limitations:

a) Pursuant to 40 CFR 60 Subpart Da, and 401 KAR 51:017, nitrogen oxides emission level in the exhaust gas shall not exceed 0.0331 lb/MMBtu during any rolling 24-hour average period (approximately 5 ppmvd @ 15 % oxygen (O_2)) when firing synthesis gas. The nitrogen oxides emission level in the exhaust gas shall not exceed 0.0246 lb/MMBtu during any rolling 24-hour average period when firing natural gas. Additionally, the permittee shall keep records of the quantity of each fuel used and the actual NOx and CO emissions during such periods. The ppm level of nitrogen oxides (at ISO standard conditions) and lb/MMBtu shall be demonstrated by stack test, and measured with use of a continuous emission monitor (CEM).

b) Pursuant to 401 KAR 51:017, the carbon monoxide emission level in the exhaust gas shall not exceed 0.0485 lb/MMBtu during any rolling 24-hour average period when firing syn-gas. The carbon monoxide emission level in the exhaust gas shall not exceed 0.0449 lb/MMBtu during any rolling 24-hour average period when firing natural gas. Additionally, the permittee shall keep records of the quantity of each fuel used and the actual NOx and CO emissions during such periods. The ppm level of carbon monoxide and lb/MMBtu shall be demonstrated by stack test, and measured with use of a continuous emission monitor (CEM).

c) Pursuant to 40 CFR 60 Subpart Da, and 401 KAR 51:017, when firing synthesis gas, the sulfur dioxide emission level in the exhaust gas shall not exceed 0.0158 lb/MMBtu based on any rolling three-hour average period (3.8 ppmvw @ 15% oxygen (O_2)). The level of sulfur dioxide converted to lb/MMBtu shall be demonstrated by stack test, and measured with use of a continuous emission monitor (CEM).

d) Pursuant to 401 KAR 51:017, the sulfur dioxide emission level in the exhaust gas shall not exceed 0.0006 lb/MMBtu when firing natural gas.

e) Pursuant to 40 CFR 60.42Da (b) emissions from this unit shall not exceed twenty (20) percent opacity (6-minute average), except for one 6-minute period per hour of not more than (27) percent opacity.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f) Pursuant to 40 CFR 60 Subpart Da, and 401 KAR 51:017, filterable particulate/PM_{10} emissions shall not exceed 0.0085 lb/MMBtu during any rolling three-hour average period when firing synthesis gas. Total particulate/PM_{10} emissions shall not exceed 0.0217 lb/MMBtu during any rolling three-hour average period when firing synthesis gas. The lb/MMBtu level of particulate emissions shall be demonstrated by stack test, then calculated based on the emission factor derived during the test, fuel consumption data, fuel heat input, and fuel heat content [see specific monitoring requirements].

g) Pursuant to 40 CFR 60 Subpart Da, and 401 KAR 51:017, Total particulate/PM_{10} emissions shall not exceed 0.0063 lb/MMBtu during any rolling three-hour average period when firing natural gas. The lb/MMBtu level of particulate emissions shall be demonstrated by stack test, then calculated based on the emission factor derived during the test, fuel consumption data, fuel heat input, and fuel heat content [see specific monitoring requirements].

h) Pursuant to 401 KAR 51:017, sulfuric acid mist (H_2SO_4) emissions shall not exceed 0.0035 lb/MMBtu during any rolling three-hour average period when firing synthesis gas. The lb/MMBtu level of sulfuric acid mist emissions shall be demonstrated by stack test, then calculated based on the emission factor derived during the test, fuel consumption data, fuel heat input, and fuel heat content.

i) Pursuant to 401 KAR 51:017, sulfuric acid mist (H_2SO_4) emissions shall not exceed 0.0001 lb/MMBtu when firing natural gas. The lb/MMBtu level of sulfuric acid mist emissions shall be assured by firing pipeline quality natural gas..

j) Pursuant to 40 CFR 60.45Da (b), mercury emissions shall not exceed 20 $x10^{-6}$ lb/MWh or 0.020 lb/GWh on an output basis. This Mercury emission limit is based on a 12-month rolling total using the procedures in 40 CFR 60.50Da (g).

k) Pursuant to 40 CFR 60.48Da, the particulate matter emission standards under 40 CFR 60.42Da, the nitrogen oxides emission standards under 40 CFR 60.44Da, and the Mercury emission standards under 40 CFR 60.45Da, apply at all times except during periods of startup, shutdown, or malfunction. Pursuant to 40 CFR 60.48Da, the SO_2 emission standards under 40 CFR 60.43Da, apply at all times except during periods of startup, shutdown, or emergency.

l) Pursuant to 401 KAR 52:020, duration of startup, shutdown and malfunction periods for the gasifier(s) are limited to 48 hours per occurrence with 3 annual occurrences for 2 gasifiers and with 29 annual occurrences for 1 gasifier. The requirement for duration and number of occurrences is waived during the first year after the initial demonstration of compliance. Startup and shutdown shall be performed consistent with the SSM plan submitted on December 4, 2006.

m) Consistent with 40 CFR 60 Subpart Da, BACT emission limits are based upon heat input to the combustion turbines.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

a) Pursuant to 401 KAR 59:005, Section 2 the permittee shall demonstrate compliance for each turbine while firing natural gas with the applicable emission standards within sixty (60) days after achieving the rated capacity at which each turbine will be operated, but not later than 180 days after initial startup of each turbine, in accordance with the requirements in 401 KAR 50:045.

b) Pursuant to 401 KAR 59:005, Section 2 the permittee shall demonstrate compliance for each turbine while firing synthesis gas with the applicable emission standards within sixty (60) days after achieving the rated capacity of each gasifier, but not later than 180 days after initial startup of gasifiers, in accordance with the requirements in 401 KAR 50:045.

c) The permittee shall determine the opacity of emissions from the stack by U.S. EPA Reference Method 9 weekly, or more frequently if requested by the Division.

d) If no additional stack tests are performed prior to the third year after demonstrating compliance, the permittee shall conduct performance tests for particulate emissions and H_2SO_4 with the allowable standards while firing synthesis gas. See Section D for further requirements.

4. Specific Monitoring Requirements:

a) Pursuant to 401 KAR 60:005, Section 3(1)(c) incorporating by reference 40 CFR 60 Da; 401 KAR 52:020, Section 26; and 401 KAR 59:005, Section 4, the permittee shall install, calibrate, maintain, and operate continuous emission monitoring systems for measuring the sulfur dioxide emissions, nitrogen oxides emissions, mercury, and either oxygen or carbon dioxide emissions. Additionally, a CEM system shall be installed, calibrated, maintained, and operated for measuring oxygen or carbon dioxide levels of the flue gases at each location where sulfur dioxide or nitrogen emissions are monitored. The permittee shall ensure the continuous emission monitoring systems are in compliance with the requirements of 401 KAR 59:005, Section 4.

b) Pursuant to 40 CFR 60.49Da (b), and 40 CFR 75, to meet the monitoring requirement for sulfur dioxide the permittee shall use a continuous emission monitor (CEM). The sulfur dioxide CEM system shall be used as the indicator of continuous compliance with the sulfur dioxide emission limits. Excluding startup and shutdown periods, if any 3-hour rolling average exceeds the sulfur dioxide emission limitation, the permittee shall initiate an investigation of the cause of the exceedance and complete necessary control device/process/CEM repairs or other corrective actions as soon as practicable.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c) Pursuant to 40 CFR 60.49Da (c) 1, the permittee shall install, calibrate, maintain, and operate a nitrogen oxides continuous emissions monitor (CEM) system or, if the permittee has installed a nitrogen oxides emission rate continuous emission monitoring system (CEMS) to meet the requirements of 40 CFR Part 75 and is continuing to meet the ongoing requirements of 40 CFR Part 75, that CEMS shall be used to meet the requirements of this permit, except that the permittee shall also meet the requirements of 40 CFR 60.51Da. Data reported to meet the requirements of 40 CFR 60.51Da shall not include data substituted using the missing data procedures in subpart D of 40 CFR Part 75, nor shall the data have been bias adjusted according to the procedures of 40 CFR Part 75.

d) Pursuant to 40 CFR 60.49Da (d) the permittee of an affected facility shall install, calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring the oxygen or carbon dioxide content of the flue gases at each location where sulfur dioxide or nitrogen oxides emissions are monitored.

e) Pursuant to 40 CFR 60.49Da (e) the continuous monitoring systems under paragraphs (b), (c), and (d) of 40 CFR 60 Subpart Da are operated and data recorded during all periods of operation of the affected facility including periods of startup, shutdown, malfunction or emergency conditions, except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments.

f) Pursuant to 40 CFR 60.49Da (f) (2) the permittee shall obtain emission data for at least 90 percent of all operating hours for each 30 successive boiler operating days. If this minimum data requirement cannot be met with a continuous monitoring system, the permittee shall supplement emission data with other monitoring systems approved by the Administrator or the reference methods and procedures as described in 40 CFR 60.49Da paragraph (h) of 40 CFR 60 Subpart Da.

g) Pursuant to 40 CFR 60.49Da (h), when it becomes necessary to supplement continuous monitoring system data to meet the minimum data requirements in 40 CFR 60.49Da paragraph (f) of 40 CFR 60 Subpart Da, the permittee shall use the reference methods and procedures as specified in 40 CFR 60.49Da paragraph (h). Acceptable alternative methods and procedures are given in 40 CFR 60.49Da paragraph (j) of 40 CFR 60 Subpart Da.

h) Pursuant to 40 CFR 60.49Da (i), the permittee shall use methods and procedures in this paragraph to conduct monitoring system performance evaluations under 40 CFR 60.13(c) and calibration checks under 40 CFR 60.13(d). Acceptable alternative methods and procedures are given in paragraph 40 CFR 60.49Da (j) of 40 CFR 60 Subpart Da.

i) Pursuant to 40 CFR 60.49Da (j), the permittee may use the following alternatives of 40 CFR 60.49Da (j) (1),(2),(3) & (4) as alternatives to the reference methods and procedures specified in 40 CFR 60 Subpart Da.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

j) Pursuant to 40 CFR 60.49Da (l) and (m), the permittee of an affected facility demonstrating compliance with an output-based standard under 40 CFR 60.42Da, 40 CFR 60.43Da, 40 CFR 60.44Da, or 40 CFR 60.45Da shall install, certify, operate, and maintain a continuous flow monitoring system meeting the requirements of Performance Specification 6 of appendix B and procedure 1 of appendix F of this subpart, and record the output of the system, for measuring the flow of exhaust gases discharged to the atmosphere; or alternatively, data from a continuous flow monitoring system certified according to the requirements of 40 CFR 75.20, meeting the applicable quality control and quality assurance requirements of 40 CFR 75.21, and validated according to 40 CFR 75.23, may be used.

k) Pursuant to 40 CFR 60.49Da (p) the permittee of an affected facility demonstrating compliance with an Mercury limit in 40 CFR 60.45Da shall install and operate a continuous emission monitoring system (CEMS) to measure and record the concentration of Mercury in the exhaust gases from each stack according to the requirements in 40 CFR 60.45Da, paragraphs (p)(1) through (p)(3) of 40 CFR 60 Subpart Da. Alternatively, for an affected facility that is also subject to the requirements of subpart I of part 75 of this chapter, the permittee may install, certify, maintain, operate and quality-assure the data from a Mercury CEMS according to 40 CFR 75.10 of this chapter and appendices A and B to 40 CFR part 75 , in lieu of following the procedures in 40 CFR 40 CFR 60.45Da, paragraphs (p)(1) through (p)(3) of 40 CFR 60 Subpart Da, and mercury CEMS data collection must conform to paragraphs (p)(4)(i) through (iv) of 40 CFR 60 Subpart Da.

l) Pursuant to 40 CFR 60.49Da (s) the permittee shall prepare and submit to the Administrator for approval a unit-specific monitoring plan for each monitoring system, at least 45 days before commencing certification testing of the monitoring systems. The permittee shall comply with the requirements in the plan. The plan must address the requirements in paragraphs (s)(1) through (6) of that section.

m) Pursuant to 40 CFR 60.13(d)(1), the owner(s) and operator(s) of all continuous monitoring systems shall perform appropriate calibration checks and zero and span adjustments in accordance with a written procedure at least once daily, in accordance with requirements specified in 40 CFR 60.13(d)(1).

n) Pursuant to 40 CFR 60.13(e), except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d), all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements which involves one cycle of operation (sampling, analyzing, and data recording) for each successive fifteen (15) minute period.

o) Pursuant to 40 CFR 60.13(f), all continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the emissions unit are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of 40 CFR 60 Appendix B shall be used.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

p) Pursuant to 40 CFR 60.13(h), for the continuous monitoring systems the owner(s) or operator(s) shall reduce all data to one-hour averages. The one-hour averages shall be computed from four or more data points equally spaced over each one-hour period. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent oxygen). All excess emissions shall be converted into units of the applicable standard using the applicable conversion procedures specified. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used to specify the applicable emission standard.

q) Pursuant to 401 KAR 52:020, Section 26, the permittee shall monitor the hours of operation and fuel consumption of each emission unit on a daily basis.

r) Pursuant to 401 KAR 52:020, Section 26, for the particulate and PM_{10} monitoring the permittee shall develop emission factors during the performance test. The permittee shall record the synthesis gas heating value and the consumption of each fuel burned. On a daily basis, the permittee shall calculate the emission rate for particulate/particulate/matter$_{-10}$ using the fuel consumption, heating value of fuel, and emission factor developed during the most recent performance test.

s) The permittee shall use Nitrogen Oxides (NO_x) Continuous Emissions Monitors (CEMs) as continuous compliance determination methods consistent with 40 CFR 64.4(d) (CAM) for those specific parameters, and to demonstrate compliance with Best Available Control Technology (BACT) limits contained in this permit, as applicable.

5. Specific Record Keeping Requirements:

a) Pursuant to 401 KAR 59:005, Section 3(4), the permittee of the source shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems and devices; and all other information required by 401 KAR 59:005 recorded in a permanent form suitable for inspection.

b) Pursuant to 401 KAR 59:005, Section 3(2), the permittee of this unit shall maintain the records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the affected facility, any malfunction of the air pollution control equipment; or any period during which a continuous monitoring system or monitoring device is inoperative. The record shall also include the type and quantity of fuel fired and the estimated emissions during each episode.

c) Records, including those documenting the results of each compliance test and all other records and reports required by this permit, shall be maintained for five (5) years pursuant to 401 KAR 52:020.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d) Pursuant to 401 KAR 52:020, Section 26, records of the hourly synthesis gas and/or natural gas (million standard cubic feet) combusted shall be maintained. Records shall be maintained to show that synthesis gas and natural gas are the sole fuels burned in the turbine.

e) Pursuant to 401 KAR 52:020, Section 26, the permittee shall maintain a weekly log of all hours of operation of each turbine, for any consecutive twelve (12) month period.

f) Pursuant to 40 CFR 60.52Da the permittee of an affected facility subject to the emissions limitations in 40 CFR 60.45Da shall provide notifications in accordance with 40 CFR 60.7(a) and shall maintain records of all information needed to demonstrate compliance including performance tests, monitoring data, fuel analyses, and calculations, consistent with the requirements of 40 CFR 60.7(f).

g) Pursuant to 401 KAR 52:020, Section 26, the permittee shall maintain a log of all Method 9 opacity readings.

6. Specific Reporting Requirements:

a) Pursuant to 40 CFR 60.51Da(a) for sulfur dioxide, nitrogen oxides, particulate matter, and mercury emissions, the performance test data from the initial and subsequent performance test and from the performance evaluation of the continuous monitors (including the transmissometer) shall be submitted to the Frankfort Central Office.

b) Pursuant to 40 CFR 60.51Da(b) for sulfur dioxide and nitrogen oxides the following information shall be reported to the Regional/Central Office for each 24-hour period consistent in accordance with the requirements of 40 CFR 60.51Da (b) items 1 through 9.

c) Pursuant to 40 CFR 60.51Da(c) if the minimum quantity of emission data as required by 40 CFR 60.49Da is not obtained for any 30 successive boiler operating days, the permittee shall submit information consistent with the requirements of 40 CFR 60.51Da (c) items 1 through 5 obtained under the requirements of 40 CFR 60.48Da (h) to the Regional Office for that 30-day period.

d) Pursuant to 40 CFR 60.51Da (d) if any standards under 40 CFR 60.43Da are exceeded during emergency conditions because of control system malfunction, the permittee of the affected facility shall submit a signed statement consistent with the requirements of 40 CFR 60.51Da (d) items 1 through 4.

e) Pursuant to 40 CFR 60.51Da(e) if fuel pretreatment credit toward the sulfur dioxide emission standard under 40 CFR 60.43Da is claimed, the permittee of the affected facility shall submit a signed statement consistent with the requirements of 40 CFR 60.51Da (e) items 1 and 2.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f) Pursuant to 40 CFR 60.51Da(f) for any periods for which sulfur dioxide or nitrogen oxides emissions data are not available, the permittee of the affected facility shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability.

g) The permittee shall the report the information required by 40 CFR 60.51Da (g) items 1 through 5 to Regional Office on an annual basis.

h) Pursuant to 40 CFR 60.51Da (h) the permittee of the affected facility shall submit a signed statement as required by 40 CFR 60.51Da (h) items 1 through 4 on an annual basis.

i) Pursuant to 40 CFR 60.51Da(i) for the purposes of the reports required under 40 CFR 60.7, periods of excess emissions are defined as all 6-minute periods during which the average opacity exceeds the applicable opacity standards under 40 CFR 60.42Da(b). Opacity levels in excess of the applicable opacity standard and the date of such excesses are to be submitted to the Regional Office each calendar quarter.

j) Pursuant to 40 CFR 60.51Da (j) the permittee of an affected facility shall submit the written reports required under 40 CFR 60 Subpart Da and 40 CFR 60 Subpart A to the Regional Office semiannually for each six-month period. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period.

k) Pursuant to 40 CFR 60.51Da(k) the permittee of an affected facility may submit electronic quarterly reports for SO_2 and/or NO_X and/or mercury in lieu of submitting the written reports required under paragraphs (b), (g), and (i) of 40 CFR 60 Subpart Da. The format of each quarterly electronic report shall be coordinated with the Regional Office. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the permittee shall coordinate with the Regional Office to obtain their agreement to submit reports in this alternative format.

l) Pursuant to 401 KAR 59:005, Section 3, minimum data requirements which follow shall be maintained and furnished in the format specified by the Division. Owners or operators of facilities required to install continuous monitoring systems shall submit for every calendar quarter a written report of excess emissions (as defined in applicable sections) to the Division. All quarterly reports shall be postmarked by the thirtieth (30th) day following the end of each calendar quarter and shall include the following information:

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

1) The magnitude of the excess emissions computed in accordance with the 401 KAR 59:005, Section 4(8), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.

2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the emissions unit. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.

3) The date and time identifying each period during which continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

m) Pursuant to 401 KAR 52:020, Section 26, for nitrogen oxides, excess emissions are defined as any 24 hour period during which the average emissions (arithmetic average) exceed the applicable nitrogen oxides emission standard. These periods of excess emissions shall be reported quarterly.

n) Pursuant to 401 KAR 52:020, Section 26, excess emissions of sulfur dioxide are defined as any 3-hour period during which the average sulfur dioxide emissions as indicated by continuous emission monitoring, or the sulfur content (or as otherwise required in an approved custom fuel sulfur monitoring plan) of the fuel being fired in the gas turbine(s) exceeds the limitations set forth in Subsection 2, Emission Limitations. These periods of excess emissions shall be reported quarterly.

o) Pursuant to 401 KAR 52:020, Section 26, for carbon monoxide, excess emissions are defined as any 24 hour period during which the average emissions (arithmetic average of three contiguous one hour periods) exceed the applicable carbon monoxide emission standard. These periods of excess emissions shall be reported quarterly.

p) Pursuant to 401 KAR 52:020, Section 26, for mercury excess emissions are defined as an annual period during which emissions exceed the applicable mercury emission standard.

q) Pursuant to 401 KAR 52:020, Section 26, for sulfuric acid mist (H_2SO_4) excess emissions are defined as any 3 hour period during which the average emissions exceed the applicable emission standard. These periods of excess emissions shall be reported quarterly.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

7. Specific Control Equipment Operating Conditions:

a) The SCR and diluent injection control measure for nitrogen oxides emissions and the acid gas scrubbing system for sulfur dioxide emissions shall be operated in accordance with manufacturer's design specifications and/or good engineering practices. The permittee shall implement good combustion control and use clean, low sulfur/low ash syngas as fuel. Natural gas may be fired at any time, as long as the annual usage does not exceed the operating limits in **Operating Limitations** (c) and (e)

b) See Section E for further requirements.

SECTION B -EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions unit: 03 (03) - Unit 3 Indirect Heat Exchanger (AUXB)

Description:
Natural gas-fired indirect heat exchanger
Maximum continuous rating: 278.8 MMBtu/hr
Control Equipment: low NOx burners
Construction commenced: estimated - 2009

Applicable Regulations:

401 KAR 59:015, New indirect heat exchangers with a capacity greater than 250 MMBtu /hour and commenced after August 17, 1971

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Db, Standards of Performance for industrial-commercial-institutional steam generating units, applies to each steam generating unit commenced after June 19, 1984 that has a maximum design heat input capacity greater than 100MMBtu/hr.

401 KAR 51:160. NOx requirements for large utility and industrial boilers; including 401 KAR 51:220, CAIR NOx ozone trading program after 2009.

401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982

1. Operating Limitations:

The auxiliary boiler shall only operate during gasifier start-up periods. The auxiliary boiler shall not operate more than 500 hours per twelve (12) consecutive months [401 KAR 51:001, Section 1 (25)].

2. Emission Limitations:

a) Pursuant to 401 KAR 59:015, Section 4(1)(b), 40 CFR 60.43b(h) and 401 KAR 51:017, particulate emissions shall not exceed 0.007 lb/MMBtu based on a three-hour average.

b) Pursuant to 401 KAR 59:015, Section 4(2) emissions shall not exhibit greater than twenty (20) percent opacity except:

1) That, for indirect heat exchangers with heat input capacity of 250 MMBtu per hour or more, a maximum of twenty-seven (27) percent opacity shall be permissible for not more than one (1) six (6) minute period in any sixty (60) consecutive minutes.

2) For emissions from an indirect heat exchanger during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations

SECTION B -EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c) Pursuant to 401 KAR 59:015, Section 5(2), 40 CFR 60.42b(k) and 401 KAR 51:017, sulfur dioxide emissions shall not exceed 0.0006 lb/MMBtu based on a twenty four-hour average. Compliance is assured through combustion of natural gas only.

d) Pursuant to 401 KAR 59:015, Section 6(1), 40 CFR 60.44b(a) and 401 KAR 51:017, nitrogen oxides emissions shall not exceed 0.036 lb/MMBtu based on a twenty four-hour average.

3. Testing Requirements:

a) Pursuant to 401 KAR 59:005, Section 2 and 401 KAR 59:015, Section 8 the permittee shall conduct performance tests for NOx, CO, and PM/PM_{10} to demonstrate compliance with the applicable emission standards within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility.

b) See Section D.

4. Specific Monitoring Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, the permittee shall monitor the hours of fuel combusted on a daily basis during each twelve (12) consecutive months.

b) Pursuant to 401 KAR 52:020, Section 26, to demonstrate continuing compliance with the BACT determination, monitoring of operations shall consist of fuel supplier certification. The fuel supplier certification shall include the name of the natural gas supplier, a statement of the natural gas heating value, weight percent sulfur and that the natural gas complies with the specifications under the definition for natural gas in 40 CFR 60.40b.

c) Pursuant to 401 KAR 51:160, the permittee shall monitor the total NOx emissions during each NOx control period as specified in 40 C.F.R. 96.70 to 96.76.

5. Specific Record Keeping Requirements:

a) Pursuant to 401 KAR 59:005, Section 3(4), the permittee of the indirect heat exchanger shall maintain a file of all measurements and performance testing measurements required by 401 KAR 59:005 recorded in a permanent form suitable for inspection.

b) Pursuant to 401 KAR 59:005, Section 3(2), the permittee of this unit shall maintain the records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the affected facility.

c) The permittee shall maintain the results of all compliance tests.

d) The permittee shall maintain records of hours of operation and natural gas usage during each twelve (12) consecutive months.

SECTION B -EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

e) Pursuant to 401 KAR 59:005, Section 3 (4), the permittee of the indirect heat exchanger shall maintain a file of all measurements, including monthly natural gas usage. The permittee shall maintain a file of the fuel supplier certification; and all other information required by 401 KAR 59:005 recorded in a permanent form suitable for inspection. The file shall be retained for at least five (5) years following the date of such measurements, maintenance, reports, and records.

6. Specific Reporting Requirements:

a) Pursuant to 401 KAR 60:005, Section 3(1)(d), the permittee shall follow the applicable reporting requirements and recordkeeping requirements specified in 40 CFR 60.49b.

b) See Section F for further requirements.

7. Specific Control Equipment Operating Conditions:

None.

SECTION B -EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit: 04 (04) - Unit 4 (Flare)

Description:

Three continuous pilots rated at 490 SCF/hr natural gas for pilot flame
Construction commenced: expected 2009

Applicable Regulations:

401 KAR 63:015, Flares

401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982

1. Operating Limitations:

a) Synthesis gas shall only be vented to the flare during periods of startup, shutdown and malfunction of the thermal oxidizer. Emissions from the flare are not eligible for relief with compliance under 401 KAR 50:055, as the normal operation of the flare occurs during periods of startup, shutdown and malfunction of other process units.

b) Pursuant to 401 KAR 51:017, the permittee shall use good flare design consistent with the requirements established in 40 CFR 63.11.

2. Emission Limitations:

a) Pursuant to 401 KAR 51:017, the flare shall be designed for and operated with no visible emissions, except for periods not exceeding a total of 5 minutes during any 2 consecutive hours.
b) Pursuant to 401 KAR 63:015, Section 3, the opacity of visible emissions the flare listed above shall not exceed 20% for more than 3 minutes in any one day.

3. Testing Requirements:

The permittee shall perform Method 22 testing for visible emissions during any period of flaring greater than one hour, for the duration of each syngas venting episode. The permittee shall observe and record in a log the following information:

1. The total duration of visible emission incident;
2. The cause of the abnormal emissions; and
3. Any corrective actions taken.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, the flare shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

b) See 3. Testing Requirements above.

5. Specific Recordkeeping Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, the permittee shall maintain a log of the dates and times of each Method 22 test and either the results of the test or reasons for not performing a Method 22 test.

b) Pursuant to 401 KAR 52:020, Section 26, the permittee shall maintain a log of each period of flaring, and the quality of synthesis gas being flared, i.e. combustion ready, untreated or partially treated by the sulfur removal units and/or acid gas system.

6. Specific Reporting Requirements:

Pursuant to 401 KAR 52:020, Section 26, duration, amounts and quality of syngas flared shall be reported as required by Section F. of this permit.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 51:017, Prevention of significant deterioration of air quality, the permittee shall comply with best available control technology with use of good flare design.

b) Permittee shall demonstrate good flare design by complying with the requirements of 40 CFR 63.11, or by an alternative demonstration approved by the Division.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 05 (05) Unit 5 (Acid Gas Removal and Thermal Oxidizer)

Description:

Production areas Acid Gas Removal System (AGR) and Tail Gas Treatment Unit will have a thermal oxidizer (TO) as a control device
Thermal Oxidizer - tail gas treatment
Construction commenced: expected 2009

Applicable Regulations:
401 KAR 59:105, New Process Gas Streams commenced after June 6, 1979

401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982

1. Operating Limitations:

a) Pursuant to 401 KAR 51:017 and 401 KAR 50:055, Section 2(5), the permittee shall operate the thermal oxidizer at all times the AGR systems is in operation.

b) The average combustion temperature of the Thermal Oxidizer (TO) shall not be operated below 1100 degrees Fahrenheit, based on a one-hour average. Upon completion of a performance test, the thermal oxidizer shall not be operated more than 28 degrees Celsius (50 degrees Fahrenheit) below the average combustion temperature limit established during the most recent performance test.

2. Emission Limitations:

a) Pursuant to 401 KAR 59:105 Section 3, no person shall cause, suffer, allow or permit the emission of hydrogen sulfide in a process gas stream to exceed ten (10) grains per 100 dscf (165 ppm by volume) at zero percent oxygen except that sources whose combined process gas stream emission rate totals less than two (2) tons per day of hydrogen sulfide shall either reduce such emissions by eighty-five (85) percent or control such emissions such that hydrogen sulfide in the gas stream emitted into the ambient air does not exceed ten (10) grains per 100 dscf (165 ppm by volume) at zero percent oxygen.

b) Pursuant to 401 KAR 59:105, Section 4, no person shall cause, suffer, allow or permit the emission of sulfur dioxide in a process gas stream to exceed 28.63 grains per 100 dscf (250 ppm by volume) at zero percent oxygen except that sources whose combined process gas stream emission rate totals less than four (4) tons per day of sulfur dioxide shall reduce such emissions by eighty-five (85) percent.

c) Pursuant to 401 KAR 51:017, the emissions of SO_2 from the sulfur recovery unit shall not exceed 100 ppm by volume (dry basis) at 0% oxygen on a three hour basis except during startup, shutdown and malfunction.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

a) Pursuant to 401 KAR 59:005, Section 2 the permittee shall conduct performance tests for the inlet and outlet concentrations of H_2S and SO_2 to demonstrate compliance with the BACT emission standards within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility.

b) The permittee shall use the data collected during the performance test to calculate and record the average combustion temperature. This average combustion temperature minus 28 degrees Celsius (50 degrees Fahrenheit) shall become the minimum operating set point of the thermal oxidizer.

4. Specific Monitoring Requirements:

a) In accordance with 401 KAR 52:020, Section 26, the permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs. Compliance shall be demonstrated by monitoring and recording the combustion temperature a minimum of recording the measured value at least once every 15 minutes. The thermocouple shall have an accuracy of the greater of 0.75 percent of the temperature measurement expressed in degrees Celsius or $\pm$ 2.5^{o}C.

b) In accordance with 401 KAR 52:020, Section 26, the permittee must perform an electronic calibration semi-annually (on a calendar year basis) of the convertor/temperature readout device. Following the electronic calibration, a thermocouple validation check must be conducted in which the readout device of a second or redundant thermocouple must yield a reading within 30 degrees Fahrenheit of each other.

c) In accordance with 401 KAR 52:020, Section 26, the permittee must conduct an accuracy audit consisting of an electronic calibration of the convertor/temperature readout device and validation of the thermocouple any time the thermocouple exceeds the manufacturer's specified maximum operating temperature range or install a new or lab certified thermal couple.

d) In accordance with 401 KAR 52:020, Section 26, the permittee must at least monthly, inspect components for integrity and electrical connections for continuity, oxidation, and galvanic corrosion.

e) Pursuant to 401 KAR 51:017 and 40 CFR 75, to meet the monitoring requirement for sulfur dioxide the permittee shall use a continuous emission monitor (CEM). The sulfur dioxide CEM system shall be used as the indicator of continuous compliance with the sulfur dioxide emission limits. The CEM may be installed either prior to the thermal oxidizer or on the exhaust stack. Excluding startup and shutdown periods, if any 3-hour rolling average exceeds the sulfur dioxide emission limitation, the permittee shall initiate an investigation of the cause of the exceedance and complete necessary process/CEM repairs or other corrective actions as soon as practicable.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f) In accordance with 401 KAR 52:020, Section 26, the permittee shall perform a qualitative visual observation of the opacity of emissions from the thermal oxidizer on a weekly basis and maintain a log of the observations. If visible emissions from the thermal oxidizer are seen, the permittee shall determine the opacity of emissions by Reference Method 9 and initiate an inspection of the thermal oxidizer and the entire process making any necessary repairs.

5. Specific Recordkeeping Requirements:

a) In accordance with 401 KAR 52:020, Section 26, the permittee shall maintain records of the following information for the thermal oxidizer:

i. The design and/or manufacturer's specifications or equivalent document.
ii. The operational procedures and preventive maintenance records.
iii. The calibration records, thermocouple validation checks, and any subsequent accuracy audits.
iv. Maintain a record (electronically or by strip chart) of the average combustion chamber temperature limit established during the most recent performance test and all relevant supporting data.
v. All periods (during periods of operations) during which the combustion chamber temperature of the thermal oxidizer is more than 28 degrees Celsius (50 degrees Fahrenheit) below the average combustion chamber temperature of the thermal oxidizer during the most recent performance test which demonstrated compliance. Each occurrence shall be considered a deviation from permit requirements.
vi. During all periods of operation(one hour rolling average) of the thermal oxidizer in which the combustion chamber temperature of the thermal oxidizer is more than 28 degrees Celsius (50 degrees Fahrenheit) below the average combustion chamber temperature of the thermal oxidizer during the most recent performance test which demonstrated compliance, or other malfunction of the thermal oxidizer, a daily log of the following information shall be kept:

a. Whether any air emissions were visible from the facilities associated with the thermal oxidizer.
b. Whether visible emissions were normal for the process.
c. The cause of the visible emissions.
d. Corrective action(s) taken shall be recorded.

vii. For the purpose of calculation excess emissions, a control efficiency of 0% shall be assumed for all periods the thermal oxidizer is receiving emissions during which the combustion chamber temperature of the thermal oxidizer is more than 28 degrees Celsius (50 degrees Fahrenheit) below the average combustion chamber temperature of the thermal oxidizer during the most recent performance test.

b) In accordance with 401 KAR 52:020, Section 26, all records shall be retained at the source for a period of five years.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. Specific Reporting Requirements:

a) Pursuant to 401 KAR 59:005, Section 3(2), the permittee of this unit shall maintain the records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the affected facility.

b) In accordance with 401 KAR 52:020, Section 26, the permittee shall maintain the results of all compliance tests.

c) In accordance with 401 KAR 52:020, Section 26, the permittee shall maintain records of monthly natural gas usage, hours of operation and amount and type of waste gas treated during each twelve (12) consecutive months.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 51:017, Prevention of significant deterioration of air quality, the permittee shall comply with best available control technology with use of low ash/low sulfur natural gas fuel and good flare design.

b) Pursuant to 401 KAR 51:017 and 401 KAR 50:055, Sections 1 and 2, any time the Thermal Oxidizer is not in operation the permittee shall initiate a shutdown of the gasifiers.

c) In accordance with 401 KAR 50:055, a thermocouple shall be used to continuously monitor the temperature of the combustion chamber of the thermal oxidizer to ensure proper combustion chamber operation. The thermocouple shall be calibrated annually.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 11 (11) Unit 11 (Sulfur material handling)

Description:

Liquid sulfur from the Acid Gas Removal System (AGR)
Bulk loading of sulfur.
Construction commenced: expected 2009

Applicable Regulations:

401 KAR 51:017, Prevention of significant deterioration of air quality
401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances

1. Operating Limitations:

None

2. Emission Limitations:

Pursuant to 401 KAR 51:017, the degassing of the molten sulfur and sulfur storage facility for the sulfur recovery unit shall be vented back into the sulfur recovery unit or the associated tail gas treatment unit. For tanker truck or railcar loading of liquid sulfur, the loading rack shall include a vapor recovery system to return the displaced vapors to either the sulfur storage tank or to the sulfur recovery unit.

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

Pursuant to 401 KAR 52:020, Section 26, the permittee shall retain records of routine and non-routine maintenance of the vapor recovery system.

6. Specific Reporting Requirements:

See Section F for further requirements.

7. Specific Control Equipment Operating Conditions:

Pursuant to 401 KAR 51:017, Prevention of significant deterioration of air quality, the permittee shall comply with best available control technology with the use of degassing and vapor recovery.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 06 (06) Unit 6 Coal Handling Operations (Coal crushing and processing operations)

Description:

Equipment includes: Conveyor transfer-800tph (37), barge unloading-700tph (38), conveyor transfer-800tph (K3), transfer house #1-800tph (THDC33), transfer house #2-800tph (THDC34), coal reclaim-105tph (CRD35)
Control equipment: Baghouses, telescopic chutes, water spray
Operating rate: see above for specific tons/hour
Construction commenced: expected 2009

Applicable Regulations:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Y, Standards of performance for coal preparation plants, for emissions units commenced after October 24, 1974, and

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

None

2. Emission Limitations:

Pursuant to 401 KAR 60:005, Section 3(1) (ff) incorporating by reference 40 CFR 60 Subpart Y, 40 CFR 60.252, the permittee subject to the provisions of this regulation shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

3. Testing Requirements:

Pursuant to 401 KAR 60:005, Section 3(1)(ff) incorporating by reference, 40 CFR 60.254, EPA Reference Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity upon request by the Division.

4. Specific Monitoring Requirements:

In accordance with 401 KAR 52:020, Section 26, the permittee shall perform a qualitative visual observation of the opacity of emissions from each stack on a weekly basis and maintain a log of the observations. If visible emissions from any stack are seen, the permittee shall determine the opacity of emissions by Reference Method 9 and initiate an inspection of the control equipment making any necessary repairs.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record Keeping Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, the permittee shall maintain the records of amount of coal received and processed.

b) Pursuant to 401 KAR 52:020, Section 26, the permittee shall maintain the results of all compliance tests. The permittee shall record each week, the date and time of each observation and opacity of visible emissions monitoring. In case of exceedances, the permittee must record the reason (if known) and the measures taken to minimize or eliminate exceedances.

6. Specific Reporting Requirements:

See Section F for further requirements.

7. Specific Control Equipment Operating Conditions:

a) The enclosure on the conveyors and transfer points, coal bunkers, and for the coal pile reclaim shall be operated to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications and/or standard operating practices.

b) Records regarding the maintenance of the control equipments shall be maintained.

c) Refer to General Conditions of the Permit, Section F. [401 KAR 50:055 Section 2(5)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 07 (07) Unit 7 Coal Handling Operations

Description:

Dead coal storage pile-90, 000 tons (20a), coal stacker to long term storage pile-2.5 acres (20b)
Control equipment: Compaction, wet suppression
Construction commenced: expected 2009

Applicable Regulations:

401 KAR 63:010, Fugitive emissions is applicable to each affected facility which emits or may emit fugitive emissions and is not elsewhere subject to an opacity standard within the administrative regulations of the Division of Air Quality.

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a) Pursuant to 401 KAR 51:017 and 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, as needed, but not be limited to the following:

1. Application and maintenance of asphalt, application of water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dusts;

2. Operation of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling;

3. The maintenance of paved roadways.

4. The prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or other earth moving equipment or erosion by water;

5. Installation and use of compaction or other measures to suppress the dust emissions during handling.

b) Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c) No one shall allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway, pursuant to 401 KAR 63:010, Section 4.

d) Pursuant to 401 KAR 51:017, the permittee shall apply compaction and water suppression control methods as BACT.

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, the permittee shall perform a qualitative visual observation on a weekly basis and maintain a log of the observations and corrective actions.

b) See Section F.

5. Specific Record Keeping Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, records of the fossil fuels processed shall be maintained.

b) Pursuant to 401 KAR 52:020, Section 26, annual records estimating the tonnage hauled on plant roadways shall be maintained.

c) Pursuant to 401 KAR 52:020, Section 26, the permittee shall maintain a log of the date, time and results of the monitoring required in Subsection 4 above.

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 5 and 401 KAR 51:017, the water spray, compaction and other control measures shall be used to maintain compliance with permitted applicable requirements, in accordance with standard operating practices.

b) Plant roadways shall be paved and controlled with water to comply with 401 KAR 63:010.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c) Pursuant to 401 KAR 59:055, Section 3(4), records regarding the maintenance of the control equipment shall be maintained.

d) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit: 08 (08) - Unit 8 Cooling Tower

Description:

Ten cell cooling tower
Circulating Rate: 375,000 gallons/minute
Control equipment: high efficiency 0.0005% mist eliminators
Construction commenced: Expected Summer 2009

Applicable Regulations:

401 KAR 63:010, Fugitive emissions, and

401 KAR 51:017, Prevention of Significant Deterioration of Air Quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

a) Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

b) Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited

c) Pursuant to 401 KAR 51:017, the cooling tower circulating water rate shall not exceed 375,000 gals/minute on a daily average.

d) Pursuant to 401 KAR 51:017 the total dissolved solids (TDS) concentration in the circulated cooling water shall not exceed a TDS concentration of 2,300 parts per million.

2. Emission Limitations:

a) Pursuant to 401 KAR 51:017, the cooling tower shall be equipped with high efficiency drift eliminators that are designed to reduce drift to less than 0.0005 percent. Verification of drift loss shall be by manufacturer's guarantee.

b) Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

c) Pursuant to 401 KAR 51:017, the PM/PM_{10} BACT emission limit for the cooling tower shall be 2.16 lbs/hr.

3. Testing Requirements:

An initial performance test to verify drift percent achieved by the drift eliminator will be conducted based on the Cooling Technology Institute (CTI) Acceptance Test Code (ATC) # 140. Drift percentage shall be tested prior to permit renewal.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, the permittee shall monitor total dissolved solids content of the circulating water on a weekly basis.

b) Pursuant to 401 KAR 52:020, Section 26, the permittee shall monitor the circulating water rate on a daily basis.

5. Specific Recordkeeping Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, the permittee shall maintain records of the manufacturer's design of the Drift Eliminators.

b) Pursuant to 401 KAR 52:020, Section 26, the permittee shall maintain records of the daily amount of water circulated.

c) Pursuant to 401 KAR 52:020, Section 26, results of the TDS monitoring required above shall be recorded weekly.

d) Pursuant to 401 KAR 52:020, Section 26, the permittee shall, using the most recent values for TDS and circulating water rate, calculate and record the emissions from the cooling tower on a weekly basis.

6. Specific Reporting Requirements:

See Section F for further requirements.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 5, the drift eliminators shall be maintained and operated to ensure the emission units are in compliance with applicable requirements of 401 KAR 63:010 and in accordance with manufacturer's specifications and/or standard operating practices.

b) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit: 09 (09) Unit 9 Emergency Fire Pump
Description:
Emergency fire pump, 2.4 MMBtu, industrial engine natural gas-fired
Construction commenced: Proposed Start-Up 2010

Applicable Regulations:

401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982

40 CFR 60, Subpart JJJJ, National Emission Standards for Stationary Spark Ignition Internal Combustion Engines and National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; Proposed Rule published in the Federal Register on June 12, 2006.

1. Operating Limitations:

a) The maximum operating time for the Emergency Fire Pump shall not exceed 500 hours in any consecutive twelve months (PSD BACT limit on operating hours).

b) See Section D

2. Emission Limitations:

Pursuant to 401 KAR 51:017 and the proposed revisions to NSPS Subpart JJJJ, owners and operators of stationary SI natural gas and lean burn LPG engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (d) of 40 CFR 60 Subpart JJJJ except that such owners and operators must meet a nitrogen oxides (NOX) emission standard of 3.0 grams per HP-hour (g/HP-hr), a carbon monoxide (CO) emission standard of 4.0 g/HP-hr, and a non-methane hydrocarbons (NMHC) emission standard of 1.0 g/HP-hr, where the date of manufacture of the engine is:

(i) Prior to July 1, 2007, for non- emergency engines with a maximum engine power greater than or equal to 500 HP;
(ii)Prior to January 1, 2009, for emergency engines.

3. Testing Requirements:

a) Pursuant to 401 KAR 59:005, Section 2 the permittee shall demonstrate compliance with the applicable emission standards within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b) Pursuant to 40 CFR 60.4244, [per proposed revisions to NSPS Subpart JJJJ published in the Federal Register on June 12, 2006] Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (1) through (6).

(1) performance test must be conducted according to the requirements in 40 CFR 60.8 and under the specific conditions that are specified by Table 2 to this subpart.

(2) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in 40 CFR 60.8(c).

(3) You must conduct three separate test runs for each performance test, as specified in 40 CFR 60.8(f). Each test run must last at least 1 hour.

(4) To determine compliance with the NOX mass per unit output emission limitation, convert the concentration of NOX in the engine exhaust using the following equation:

```
ER =(Cd ×1 912 ×10-3 × Q × T) / (HP - hr) (Eq. 1)

Where:
ER = Emission rate of NOX in g/HP-hr.
Cd = Measured NOX concentration in parts
per million (ppm).
1.912 × 10-3 = Conversion constant for ppm
NOX to grams per standard cubic meter
at 25 degrees Celsius.
Q = Stack gas volumetric flow rate, in
standard cubic meter per hour.
T = Time of test run, in hours.
HP-hr = Brake work of the engine,
horsepower-hour (HP-hr).
```

(5) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using the following equation:

```
ER = (Cd ×1 164 ×10-3 × Q × T) / (HP - hr)  (Eq. 2)

Where:
ER = Emission rate of CO in g/HP-hr.
Cd = Measured CO concentration in ppm.
1.164 × 10-3 = Conversion constant for ppm
CO to grams per standard cubic meter at
25 degrees Celsius.
Q = Stack gas volumetric flow rate, in
standard cubic meters per hour.
T = Time of test run, in hours.
HP-hr = Brake work of the engine, in HP-hr.
```

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(6) To determine compliance with the NMHC mass per unit output emission limitation, convert the concentration of NMHC in the engine exhaust using the following equation:

```
ER = (Cd ×1 832 ×10-3 × Q × T) / (HP - hr) (Eq. 3)

Where:
ER = Emission rate of NMHC in g/HP-hr.
Cd = NMHC concentration measured as
propane in ppm.
1.832 × 10-3 = Conversion constant for ppm
NMHC measured as propane, to grams
per standard cubic meter at 25 degrees
Celsius.
Q = Stack gas volumetric flow rate, in
standard cubic meters per hour.
T = Time of test run, in hours.
HP-hr = Brake work of the engine, in HP-hr.
```

4. Specific Monitoring Requirements:

a) In accordance with 401 KAR 52:020, Section 26, the permittee shall monitor the monthly fuel usage, the average monthly fuel heat content, and the monthly hours of operation.

b) Pursuant to 40 CFR 60.4237 the permittee of an emergency stationary SI internal combustion engine must install a non-resettable hour meter prior to startup of the engine.

5. Specific Recordkeeping Requirements:

a) In accordance with 401 KAR 52:020, Section 26, the permittee shall maintain records of monthly fuel used, monthly average fuel heat content, and monthly hours of operation of the emergency fire pump.

b) Pursuant to 40 CFR 60.4245(a) owners and operators of all stationary SI ICE must keep records of the information in paragraphs (1) through (4).

(1) All notifications submitted to comply with this subpart and all documentation supporting any notification.
(2) Maintenance conducted on the engine.
(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90 and 1048.
(4) If the stationary SI internal combustion engine is not a certified engine, documentation that the engine meets the emission standards.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c) Pursuant to 40 CFR 60.4245(b) the permittee of stationary SI emergency ICE must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

6. Specific Reporting Requirements:

a) Pursuant to 40 CFR 60.4245(c) owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in 40 CFR 60.4231 must submit an initial notification as required in 40 CFR 60.7(a)(1). The notification must include the information in paragraphs (1) through (5).

(1) Name and address of the owner or operator;
(2) The address of the affected source;
(3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
(4) Emission control equipment; and
(5) Fuel used.

b) Pursuant to 40 CFR 60.4245(d) owners and operators of stationary SI ICE that have not been certified by an engine manufacturer to meet the emission standards in 40 CFR 60.4231 must submit a copy of each performance test as conducted in 40 CFR 60.4244 within 30 days after the test has been completed.

7. Specific Control Equipment Operating Conditions:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit: 10 (10) Plant Roadways [Emissions Units: HRP]

Description:
Paved and unpaved roadways
Construction commenced: Proposed Start-Up 2008

Applicable Regulations:

401 KAR 63:010, Fugitive emissions is applicable to each affected facility which emits or may emit fugitive emissions and is not elsewhere subject to an opacity standard within the administrative regulations of the Division of Air Quality.

401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982

1. Operating Limitations:

a) Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not be limited to the following:

1. application and maintenance of asphalt, application of water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dusts;

2. the maintenance of paved roadways in a clean condition;

3. the prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or other earth moving equipment or erosion by water.

b) Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

c) No one shall allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway, pursuant to 401 KAR 63:010, Section 4.

2. Emission Limitations:
None

3. Testing Requirements:
None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

See Section F.

5. Specific Record Keeping Requirements:

Records of the tonnage of materials hauled shall be maintained for emissions inventory purposes.

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

a) All control measures shall be in place, properly maintained, and in operation to maintain compliance with the permitted emission limitations, and in accordance with standard operating procedures. (401 KAR 51:017 and 401 KAR 50:055)

b) See Section E for further requirements.

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of monitoring may be necessary. Process and emission control equipment at each insignificant activity subject to a general applicable regulation shall be inspected monthly and qualitative visible emission evaluation made. The results of the inspections and observations shall be recorded in a log, noting color, duration, density (heavy or light), cause and any conservative actions taken for any abnormal visible emissions.

Description	Generally Applicable Regulation
Cold Solvent Parts Cleaners	401 KAR 59:0158
10,000 Gallon Diesel Fuel Storage Tank	None
2-20,000 Gallon Miscellaneous Tanks	None
Maintenance Activities	None
Dead Coal Storage Pile	401 KAR 63:010
Slag Landfill	401 KAR 63:010
Misc. Storage Tanks	401 KAR 68:150
Ammonia Storage Tanks	401 KAR 68:150

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. Particulate matter ($PM/PM_{10}/PM_{2.5}$), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), mercury (Hg) and sulfuric acid mist (H_2SO_4) emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.

3. Emission Units 01 and 02 shall be performance tested initially for compliance with the emission standards for PM/PM_{10} (filterable and total); sulfur dioxide (SO_2); nitrogen oxides (NO_x); carbon monoxide (CO), mercury; and H_2SO_4 by applicable reference methods, or by equivalent or alternative test methods specified in this permit or approved by the cabinet (and U.S.EPA, if required).

4. Emission Units 01 and 02 shall be performance tested biannually (once every 24 months) for compliance with the emission standards for PM/PM_{10} (filterable and total); mercury and H_2SO_4 by applicable reference methods, or by equivalent or alternative test methods specified in this permit or approved by the cabinet (and U.S.EPA, if required).

5. Emission Unit 01 or 02 shall be performance tested using Method 26A or by equivalent or alternative test methods approved by the cabinet to determine emissions of HCl. Results shall be used to confirm that emissions of Hazardous Air Pollutants are below 10 tons per a single HAP and 25 tons per combined HAPs in a year. This testing will confirm that the requirements in 40 CFR 63 do not apply.

6. Emission Units 03 (Auxiliary Boiler) shall be performance tested initially for compliance with the emission standards for PM/PM_{10} (filterable); nitrogen oxides (NO_x); and carbon monoxide (CO), by applicable reference methods, or by equivalent or alternative test methods specified in this permit or approved by the cabinet (and U.S.EPA, if required).

7. The maximum operating time for Emission Units 03 (Auxiliary Boiler) and emergency fire pump shall not exceed 500 hours each in any consecutive twelve months (401 KAR 51:017).

8. After the initial compliance test for Units 01 and 02, and CEMS certification as stated in 401 KAR 50:055, continuing compliance with the emission standards shall be determined by continuous monitoring systems for NOx, CO, Hg, and SO_2.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b (IV)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
    a. Date, place as defined in this permit, and time of sampling or measurements;
    b. Analyses performance dates;
    c. Company or entity that performed analyses;
    d. Analytical techniques or methods used;
    e. Analyses results; and
    f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division of Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division of Air Quality [Sections 1b(IV) 2 and 1a(8) of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
    a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
    b. To access and copy any records required by the permit:
    c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

    Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Section 1b (V)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1 the permittee shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
    a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
    b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.

8. The permittee shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7. above) to the Regional Office listed on the front of this permit within 30 days. Deviations from permit requirements, including those previously reported under F.7 above, shall be included in the semiannual report required by F.6 [Section 1b (V) 3, 4. of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26].

9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
    a. Identification of the term or condition;
    b. Compliance status of each term or condition of the permit;
    c. Whether compliance was continuous or intermittent;
    d. The method used for determining the compliance status for the source, currently and over the reporting period.
    e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following addresses:

Division of Air Quality
Owensboro Regional Office
3032 Alvey Park Drive
Suite 700
Owensboro, KY 42303

U.S. EPA Region 4
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta, GA 30303-8960

Division of Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.

11. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

SECTION G - GENERAL PROVISIONS

(a) General Compliance Requirements

1. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 and of the Clean Air Act and is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a, 3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].

2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a, 6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
   a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
   b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
   c. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;
   d. If any additional applicable requirements of the Acid Rain Program become applicable to the source.

   Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Section 1a, 7,8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a, 14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a, 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

8. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens.[Section 1a, 15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a, 10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].

11. This permit does not convey property rights or exclusive privileges [Section 1a, 9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Environmental and Public Protection or any other federal, state, or local agency.

13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].

14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].

15. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

SECTION G - GENERAL PROVISIONS (CONTINUED)

16. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the permittee from enforcement actions for violating an applicable requirement prior to or at the time of issuance. Compliance with the conditions of a permit shall be considered compliance with:
    a. Applicable requirements that are included and specifically identified in the permit and
    b. Non-applicable requirements expressly identified in this permit.

17. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.

(b) Permit Expiration and Reapplication Requirements

1. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].

2. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020 Section 8(2)].

(c) Permit Revisions

1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division of Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

SECTION G - GENERAL PROVISIONS (CONTINUED)

(d) Construction, Start-Up, and Initial Compliance Demonstration Requirements

Pursuant to a duly submitted application the Kentucky Division of Air Quality hereby authorizes the construction of the equipment described herein, Emissions Units 01 through 11 in accordance with the terms and conditions of this permit.

1. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

2. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
   a. The date when construction commenced.
   b. The date of start-up of the affected facilities listed in this permit.
   c. The date when the maximum production rate specified in the permit application was achieved.

3. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.

4. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the proposed permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate thereafter only for the purpose of demonstrating compliance, unless otherwise authorized by Section I of this permit or order of the Cabinet.

5. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration or test on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit and the permittee must furnish to the Division of Air Quality's Frankfort Central Office a written report of the results of such performance test

SECTION G - GENERAL PROVISIONS (CONTINUED)

6. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

7. Pursuant to 401 KAR 50:045 Section 5 in order to demonstrate that a source is capable of complying with a standard at all times, a performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division of Air Quality may waive these requirement on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.

(e) Acid Rain Program Requirements

1. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

2. The source shall comply with all requirements and conditions of the Title IV, Acid Rain Permits issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.

SECTION G - GENERAL PROVISIONS (CONTINUED)

(f) Emergency Provisions

1. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
   a. An emergency occurred and the permittee can identify the cause of the emergency;
   b. The permitted facility was at the time being properly operated;
   c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
   d. Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
   e. This requirement does not relieve the source of other local, state or federal notification requirements.

2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

(g) Risk Management Provisions

1. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

   RMP Reporting Center
   P.O. Box 1515
   Lanham-Seabrook, MD 20703-1515.

2. If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION G - GENERAL PROVISIONS (CONTINUED)

(h) Ozone depleting substances

1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
   a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
   b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
   c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
   d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
   e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
   f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION H - ALTERNATE OPERATING SCENARIOS

Not Applicable

SECTION I - COMPLIANCE SCHEDULE

Not Applicable

SECTION J – ACID RAIN

TITLE IV PHASE II ACID RAIN

ACID RAIN PERMIT CONTENTS

1) Statement of Basis

2) SO_2 allowances allocated under this permit and NOx requirements for each affected unit.

3) Comments, notes and justifications regarding permit decisions and changes made to the permit application forms during the review process, and any additional requirements or conditions.

4) The permit application submitted for this source. The owners and operators of the source must comply with the standard requirements and special provisions set forth in the Phase II Application and the Phase II NOx Compliance Plan.

5) Summary of Actions

- **Statement of Basis:**

Statutory and Regulatory Authorities: In accordance with KRS 224.10-100 and Titles IV and V of the Clean Air Act, the Kentucky Environmental and Public Protection Cabinet, Division of Air Quality issues this permit pursuant to 401 KAR 52:020, Permits, 401 KAR 52:060, Acid Rain Permit, and Federal Regulation 40 CFR 76.

PERMIT (Conditions)

Plant Name: Cash Creek Generation Station
Affected Unit: 01 – HRSG-1, 02 – HRSG-2

1. SO_2 Allowance Allocations and NO_x Requirements for the affected unit:

SO_2 Allowances	**Year**				
	2006	2007	2008	2009	2010
Tables 2, 3 or 4 of 40 CFR Part 73	0*	0*	0*	0*	0*

NO_x Requirements	
NO_x Limits	N/A**

* For newly constructed units, there are no SO2 allowances per USEPA Acid Rain Program

** These units currently do not have applicable NO_x limits set by 40 CFR, part 76**.** Limits will be set by 40 CFR 76 upon construction.

PERMIT (Conditions)

2. Comments, Notes, and Justifications:

The two (2) Integrated Combined Cycle Combustion Turbines with heat recovery steam generators, units 01 and 02 will be constructed after the SO_2 allocation date; therefore these units will have no SO_2 allowances allocated by U.S. EPA and must obtain allowances.

The two (2) Combined Cycle Combustion Turbines, units 01 and 02 do not have applicable NO_x limits set by 40 CFR part 76.

3. Permit Application:

The Phase II Permit Application is a part of this permit and the source must comply with the standard requirements and special provisions set forth in the Phase II Application.

4. Summary of Actions:

Draft Title V with Acid Rain Permit was advertised for public comments.

Present Action:

Proposed Title V permit being issued with the Title IV permit.

SECTION K – NOx BUDGET

Statement of Basis

Statutory and Regulatory Authorities: In accordance with KRS 224.10-100, the Kentucky Environmental and Public Protection Cabinet issues this permit pursuant to 401 KAR 52:020 Title V permits, 401 KAR 51:210, CAIR NOx Annual Trading Program and 401 KAR 51:220, CAIR NOx Ozone Trading Program.

NOx Budget Permit Application, Form DEP 7007EE

The CAIR Permit application for these electrical generating units was submitted to the Division and received on May 4, 2006. Requirements contained in that application are hereby incorporated into and made part of this CAIR Permit. Pursuant to 401 KAR 52:020, Section 3, the source shall operate in compliance with those requirements.

Comments, notes, justifications regarding permit decisions and changes made to the permit application forms during the review process, and any additional requirements or conditions.

Affected units are two (2) combined cycle combustion turbine rated 2114 MMBtu/hour and one 278.8 mmBtu/hr auxiliary boiler. Each combustion turbine unit has a capacity to generate 25 megawatts or more of electricity, which is offered for sale. The combustion turbine units use syngas from coal and natural gas as a fuel source, and are used as electric generating units. The auxiliary boiler has a capacity greater than the 250 MMBtu/hour, thus 401 KAR 51:220 is applicable, however since it is not considered an Electric Generating Unit, 401 KAR 52:210 is not applicable..

Summary of Actions

The CAIR Permit is being issued as part of the initial Title V permit for this source. Public, affected state, and U.S. EPA review will follow procedures specified in 401 KAR 52:100.